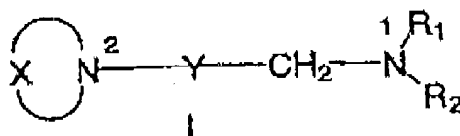


Atty Dkt. No.: SMAR-020
 USSN: 10/057,846

AMENDMENTS

In the Claims:

1. (Currently Amended): A pharmaceutical composition ~~for inhibiting cellular invasion or angiogenesis~~, wherein the composition comprises one or more cellular invasion or angiogenesis inhibiting compounds of formula I or II or pharmaceutically acceptable salts thereof, and a pharmaceutically acceptable carrier, wherein formula I is:



wherein:

X is a saturated, or unsaturated linear, or branched alkyl chain of between eleven and thirty carbons optionally substituted with one or more substituents selected from the group consisting of: oxo, [[.]] thiocarbonyl, oxime, -OH, -OR, -O₂CR, -SH, -SR, -SOCR, -NH₂, -NHR, -NR₂, -NR₃⁺[[.]], -NHCOR, -I, -Br, -Cl, -F, -CN, -CO₂H, -CO₂R, -CHO, -COR, -CONH₂, -CONHR, NRCOR, -CONR₂, -COSR, -NO₂, -OSO₃H, -SO₃H, -SOR and -SO₂R; wherein one or more CH₂ groups if present in the alkyl chain, is optionally replaced by a moiety selected from the group consisting of: O, S, [[.]] and NH; and wherein one or more C and CH groups if present in the alkyl chain, is optionally replaced with NH;

R₁ and R₂ are independently selected from the group consisting of: hydrogen; methyl; a linear, branched, or cyclic saturated, or unsaturated alkyl group containing one to ten carbons optionally substituted with one or more substituents selected from the group consisting of: -OH, -OR, =O, =S, =N-OH, -O₂CR, -SH, -SR, -SOCR, -NH₂, -

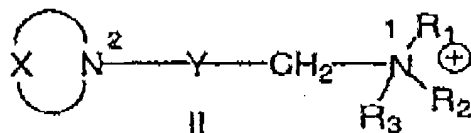
Atty Dkt. No.: SMAR-020
 USSN: 10/057,846

NHR, -NR₂, -NR₃⁺, -NHCOR, -I, -Br, -Cl, -F, -CN, -CO₂H, -CO₂R, -CHO, -COR, -CONH₂, -CONHR, NRCOR, -CONR₂, -COSH, -COSR, -CSOR, NO₂, -OSO₃H, -SO₃H, -SOR and -SO₂R; and benzyl, wherein a phenyl ring of the benzyl is optionally substituted with one or more substituents selected from the group consisting of: R, -OH, -OR, -O₂CR, -SH, -SR, -SOCR, -NH₂, -NHR, -NHR₂, -NHCOR, -I, -Br, -Cl, -F, -CN, -CO₂H, -CO₂R, -CHO, -COR, -CONH₂, -CONHR, -CONR₂, -COSH, -COSR, -NO₂, -SO₃H and -SO₂R; providing neither of R₁ and R₂ is an acyl or thioacyl residue forming an amide with N¹;

Y is a linear, branched, or cyclic, saturated, or unsaturated alkyl chain containing one to ten carbons optionally substituted with one or more substituents selected from the group consisting of: epoxide, -OH, -OR, =O, =S, =N-OH, -O₂CR, -SH, SR, -I, -Br, -Cl, -F, -CN, -CO₂R, -CHO, -COR, -CONH₂, -CONHR, NRCOR, -CONR₂, NO₂, -SOR and -SO₂R; wherein one or more CH₂ groups if present in the alkyl chain, is optionally replaced by O or S;

R is a linear, branched, or cyclic one to ten carbon saturated, or unsaturated alkyl group optionally substituted with one or more substituents selected from the group consisting of: epoxide, -OH, -OR', =O, =S, =N-OH, -O₂CR', -SH, -SR', -SOCR', -OSO₃H, -NH₂, -NHR', -NHR'₂, -NR₃⁺, -NHCOR', NR'COR', -I, -Br, -Cl, -F, -CN, -CO₂H, -CO₂R', -CHO, -COR', CONH₂, -CONHR', -CONR'₂, -COSH, -COSR', -NO₂, -SO₃H, -SOR' and -SO₂R'; wherein R' is a linear, branched, or cyclic one to ten carbon, saturated, or unsaturated alkyl group optionally substituted with -NH₂;

and wherein formula II is:



wherein:

X is a saturated, or unsaturated linear, or branched alkyl chain of between eleven and thirty carbons optionally substituted with one or more substituents selected from the

Atty Dkt. No.: SMAR-020
USSN: 10/057,846

group consisting of: oxo, thiocarbonyl, oxime, -OH, -OR, -O₂CR, -SH, -SR, -SOCR, -NH₂, -NHR, -NR₂, -NR₃⁺, -NHCOR, -I, -Br, -Cl, -F, -CN, -CO₂H, -CO₂R, -CHO, -COR, -CONH₂, -CONHR, NRCOR, -CONR₂, -COSR, -NO₂, -OSO₃H, -SO₃H, -SOR and -SO₂R; wherein one or more CH₂ groups in the alkyl chain if present, is optionally replaced by a moiety selected from the group consisting of: O, S and NH; and wherein one or more C or CH groups in the alkyl chain if present, is optionally replaced with NH;

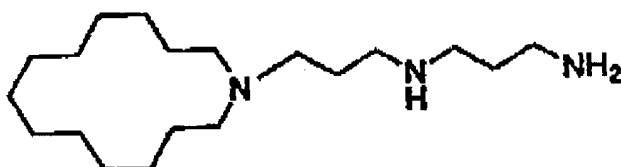
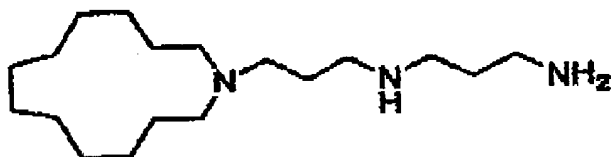
R₁, R₂, and R₃ are independently selected from the group consisting of: methyl; a linear, branched, or cyclic, saturated, or unsaturated alkyl group containing one to ten carbons optionally substituted with one or more substituents selected from the group consisting of: -OH, -OR, =O, =S, =N-OH, -O₂CR, -SH, -SR, -SOCR, -NH₂, -NHR, -NR₂, -NR₃⁺, -NHCOR, -I, -Br, -Cl, -F, -CN, -CO₂H, -CO₂R, -CHO, -COR, -CONH₂, -CONHR, NRCOR, -CONR₂, -COSH, -COSR, -CSOR, NO₂, -OSO₃H, -SO₃H, -SOR and -SO₂R; and benzyl, wherein a phenyl ring of the benzyl is optionally substituted with one or more substituents selected from the group consisting of: R, -OH, OR, -O₂CR, -SH, -SR, -SOCR, -NH₂, -NHR, -NHR₂, -NHCOR, -I, -Br, -Cl, -F, -CN, -CO₂H, -CO₂R, -CHO, -COR, -CONH₂, -CONHR, -CONR₂, -COSH, -COSR, -NO₂, SO₃H, -SOR and -SO₂R; providing none of R₁, R₂, and R₃ is an acyl or thioacyl residue forming an amide with N¹;

Y is a linear, branched, or cyclic, saturated, or unsaturated alkyl chain containing one to ten carbons optionally substituted with one or more substituents selected from the group consisting of: epoxide -OH, -OR, =O, =S, =N-OH, -O₂CR, -SH, -SR, -I, -Br, -Cl, -F, -CN, -CO₂R, -CHO, -COR, -CONH₂, -CONHR, NRCOR, -CONR₂, NO₂, -SOR and -SO₂R; wherein one or more CH₂ groups if present in the alkyl chain, is optionally replaced by O or S; and,

R is a linear, branched, or cyclic one to ten carbon saturated, or unsaturated alkyl group optionally substituted with one or more substituents selected from the group consisting of: epoxide, -OH, -OR', =O, =S, =N-OH, -O₂CR', -SH, -SR', -SOCR', -OSO₃H, -NH₂, -NHR', -NHR'₂, -NR'₃⁺, -NHCOR', NR'COR', -I, -Br, -Cl, -F, -CN, -CO₂H, -CO₂R', -CHO, -COR', -CONH₂, -CONHR', -CONR'₂, -COSH, -COSR', -NO₂, -SO₃H, -SOR' and -SO₂R'; wherein R' is a linear, branched, or cyclic one to ten carbon, saturated, or unsaturated alkyl group optionally substituted with -NH₂;

and providing that the pharmaceutical composition is not:

Atty Dkt. No.: SMAR-020
USSN: 10/057,846



or



2. (Original): The composition of claim 1, wherein Y is optionally substituted $(CH_2)_n$ in which n is 1-5.
3. (Original): The composition of claim 1, wherein X is a saturated linear or branched alkyl chain of 11-16 carbon atoms, optionally substituted with R.
4. (Original): The composition of claim 1, wherein X is an unsaturated linear or branched alkyl chain of 11-16 carbon atoms, optionally substituted with R.
5. (Previously Presented): The composition of claim 1, wherein X is a fully

Atty Dkt. No.: SMAR-020
USSN: 10/057,846

unsaturated -linear alkyl chain of 11-16 carbon atoms, optionally substituted with R.

6. (Original): The composition of claim 1, wherein the compound is of formula I in which one or both R_1 and R_2 is a linear or branched alkyl group optionally substituted by a substituent selected from the group consisting of: NH_2 , $-NHR$, $-NR_2$, $-NR_3^+$ and $-NHCOR$.
7. (Original): The composition of claim 1, wherein the compound is of formula I in which one or both R_1 and R_2 is selected from the group consisting of: hydrogen; methyl; and a linear or branched alkyl group, optionally substituted with a substituent selected from the group consisting of: $-OH$, $-OR$, and $=O$.
8. (Original): The composition of claim 1, wherein the compound is of formula I in which one or both R_1 and R_2 is a linear or branched C_2 to C_6 alkyl group, optionally substituted with a substituent selected from the group consisting of: NH_2 , $-NHR$, $-NR_2$, $-NR_3^+$ and $-NHCOR$.
9. (Original): The composition of claim 1, wherein the compound is of formula I in which one or both R_1 and R_2 is selected from the group consisting of: hydrogen; methyl; and a linear or branched C_2 to C_6 alkyl group, optionally substituted with a substituent selected from the group consisting of: $-OH$, $-OR$, and $=O$.
10. (Original): The composition of claim 1, wherein the compound is of formula II in which one or more of R_1 , R_2 , and R_3 is a linear or branched alkyl group, optionally substituted with a substituent selected from the group consisting of: NH_2 , $-NHR$, $-NR_2$, $-NR_3^+$ and $-NHCOR$.
11. (Original): The composition of claim 1, wherein the compound is of formula II in which one or more of R_1 , R_2 , and R_3 is selected from the group consisting of: methyl; and a linear or branched alkyl group optionally substituted with a substituent selected from the group consisting of: $-OH$, $-OR$, and $=O$.

Atty Dkt. No.: SMAR-020
USSN: 10/057,846

12. (Original): The composition of claim 1, wherein the compound is of formula II in which one or more of R_1 , R_2 , and R_3 is a linear or branched C_2 to C_6 alkyl group, optionally substituted with a substituent selected from the group consisting of: NH_2 , $-NHR$, $-NR_2$, $-NR_3^+$ and $-NHCOR$.

13. (Original): The composition of claim 1, wherein the compound is of formula II in which one or more of R_1 , R_2 , and R_3 is selected from the group consisting of: methyl; and a linear or branched C_2 to C_6 alkyl group, optionally substituted with a substituent selected from the group consisting of: $-OH$, $-OR$, and $=O$.

14. (Previously Presented): The composition of claim 1, wherein the compound is of formula I in which:

- (a) Y is $(CH_2)_n$ and n is 1, 2, or 3;
- (b) X is a saturated or unsaturated linear alkyl chain of 11-15 carbon atoms, optionally substituted with a C_1 - C_6 linear or branched alkyl group; or, a fully unsaturated linear alkyl chain of 11-16 carbon atoms;
- (c) one of R_1 and R_2 is selected from the group consisting of: H , methyl, and a linear or branched C_2 - C_6 alkyl group; and,
- (d) another of R_1 and R_2 is a linear or branched C_2 - C_6 alkyl group optionally substituted with a substituent selected from the group consisting of: NH_2 , $-NHR$, $-NR_3^+$, and $-NHCOR$, wherein R is a linear or branched C_1 - C_6 saturated or unsaturated alkyl group.

15. (Previously Presented): The composition of claim 1, wherein the compound is of formula II in which:

- (a) Y is $(CH_2)_n$ and n is 1, 2, or 3;
- (b) X is a saturated or unsaturated linear alkyl chain of 11-15 carbon atoms, optionally substituted with R , with a C_1 - C_6 linear or branched alkyl group; or, a fully unsaturated linear alkyl chain of 11-16 carbon atoms;
- (c) one or two of R_1 , R , and R_3 is methyl, or a linear or branched C_2 - C_6 alkyl

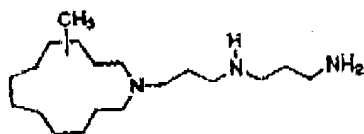
Atty Dkt. No.: SMAR-020
USSN: 10/057,846

group; and,

(d) another of R_1 , R , and R_3 is a linear or branched C_2 - C_6 alkyl group optionally substituted with a substituent selected from the group consisting of: NH_2 , $-NHR$, NR_3^+ and $-NHCOR$, wherein R is a linear or branched C_1 - C_6 saturated or unsaturated alkyl group.

16. (Canceled)

17. (Original): The composition of claim 1, wherein a compound in the composition has the structure:

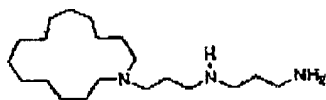


wherein the CH_3 group is joined at one of C12, C-13, C-14 and C-15.

18. (Previously Presented): The composition of claim 1, wherein a compound in the composition is selected from the group consisting of: N-(3-azacyclotridec-1-ylpropyl)-1,3-propanediamine, N-(3-azacyclotetradec-1-ylpropyl)-1,3-propanediamine and N-[3-[(6Z)-azacyclopentadec-6-en-1-yl]propyl]-1,3-propanediamine.

19. (Canceled)

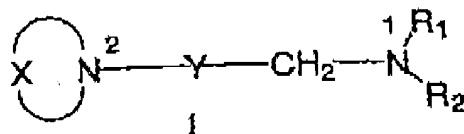
20. (Previously Presented): The composition of claim 1, wherein a compound in the composition has the structure:



Atty Dkt. No.: SMAR-020
 USSN: 10/057,846

Claims 21 - 39. (Canceled)

40. (Previously Presented) A method for inhibiting cellular invasion or angiogenesis in a patient in need thereof, comprising administering to the patient, an amount of a compound or pharmaceutically acceptable salt thereof effective to inhibit cellular invasion or angiogenesis in a tissue of the patient, the compound being of formula I or II, wherein formula I is:



wherein:

X is a saturated, or unsaturated linear, or branched alkyl chain of between eleven and thirty carbons optionally substituted with one or more substituents selected from the group consisting of oxo, thiocarbonyl, oxime, -OH, -OR, -O₂CR, -SH, -SR, -SOCR, -NH₂, -NHR, -NR₂, -NR₃⁺, -NHCOR, -I, -Br, -Cl, -F, -CN, -CO₂H, -CO₂R, -CHO, -COR, -CONH₂, -CONHR, NRCOR, -CONR₂, -COSR, -NO₂, -OSO₃H, -SO₃H, -SOR and -SO₂R; wherein one or more CH₂ groups if present in the alkyl chain, is optionally replaced by a moiety selected from the group consisting of: O, S, and NH; and wherein one or more C and CH groups if present in the alkyl chain, is optionally replaced with NH;

R₁ and R₂ are independently selected from the group consisting of: hydrogen; methyl; a linear, branched, or cyclic saturated, or unsaturated alkyl group containing one to ten carbons optionally substituted with one or more substituents selected from the group consisting of: -OH, -OR, =O, =S, =N-OH, -O₂CR, -SH, -SR, -SOCR, -NH₂, -NHR, -NR₂, -NR₃⁺, -NHCOR, -I, -Br, -Cl, -F, -CN, -CO₂H, -CO₂R, -CHO, -COR, -

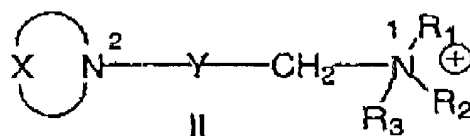
Atty Dkt. No.: SMAR-020
 USSN: 10/057,846

CONH₂, -CONHR, NRCOR, -CONR₂, -COSH, -COSR, -CSOR, NO₂, -OSO₃H, -SO₃H, -SOR and -SO₂R; and benzyl, wherein a phenyl ring of the benzyl is optionally substituted with one or more substituents selected from the group consisting of: R, -OH, -OR, -O₂CR, -SH, -SR, -SOCR, -NH₂, -NHR, -NHR₂, -NHCOR, -I, -Br, -Cl, -F, -CN, -CO₂H, -CO₂R, -CHO, -COR, -CONH₂, -CONHR, -CONR₂, -COSH, -COSR, -NO₂, -SO₃H and -SO₂R; providing neither of R₁ and R₂ is an acyl or thioacyl residue forming an amide with N¹;

Y is a linear, branched, or cyclic, saturated, or unsaturated alkyl chain containing one to ten carbons optionally substituted with one or more substituents selected from the group consisting of: epoxide, -OH, -OR, =O, =S, =N-OH, -O₂CR, -SH, SR, -I, -Br, -Cl, -F, -CN, -CO₂R, -CHO, -COR, -CONH₂, -CONHR, NRCOR, -CONR₂, NO₂, -SOR and -SO₂R; wherein one or more CH₂ groups if present in the alkyl chain, is optionally replaced by O or S;

R is a linear, branched, or cyclic one to ten carbon saturated, or unsaturated alkyl group optionally substituted with one or more substituents selected from the group consisting of: epoxide, -OH, -OR', =O, =S, =N-OH, -O₂CR', -SH, -SR', -SOCR', -OSO₃H, -NH₂, -NHR', -NHR'₂, -NR₃⁺, -NHCOR', NR'COR', -I, -Br, -Cl, -F, -CN, -CO₂H, -CO₂R', -CHO, -COR', CONH₂, -CONHR', -CONR'₂, -COSH, -COSR', -NO₂, -SO₃H, -SOR' and -SO₂R'; wherein R' is a linear, branched, or cyclic one to ten carbon, saturated, or unsaturated alkyl group optionally substituted with -NH₂;

and wherein formula II is:



wherein:

X is a saturated, or unsaturated linear, or branched alkyl chain of between eleven and thirty carbons optionally substituted with one or more substituents selected from the group consisting of: oxo, thiocarbonyl, oxime, -OH, -OR, -O₂CR, -SH, -SR, -SOCR, -

Atty Dkt. No.: SMAR-020
 USSN: 10/057,846

NH₂, -NHR, -NR₂, -NR₃⁺, -NHCOR, -I, -Br, -Cl, -F, -CN, -CO₂H, -CO₂R, -CHO, -COR, -CONH₂, -CONHR, NRCOR, -CONR₂, -COSR, -NO₂, -OSO₃H, -SO₃H, -SOR and -SO₂R; wherein one or more CH₂ groups in the alkyl chain if present, is optionally replaced by a moiety selected from the group consisting of: O, S, and NH; and wherein one or more C or CH groups in the alkyl chain if present, is optionally replaced with NH-;

R₁, R₂, and R₃ are independently selected from the group consisting of: methyl; a linear, branched, or cyclic, saturated, or unsaturated alkyl group containing one to ten carbons optionally substituted with one or more substituents selected from the group consisting of: -OH, -OR, =O, =S, =N-OH, -O₂CR, -SH, -SR, -SOCR, -NH₂, -NHR, -NR₂, -NR₃⁺, -NHCOR, -I, -Br, -Cl, -F, -CN, -CO₂H, -CO₂R, -CHO, -COR, -CONH₂, -CONHR, NRCOR, -CONR₂, -COSH, -COSR, -CSOR, NO₂, -OSO₃H, -SO₃H, -SOR and -SO₂R; and benzyl, wherein a phenyl ring of the benzyl is optionally substituted with one or more substituents selected from the group consisting of: R, -OH, OR, -O₂CR, -SH, -SR, -SOCR, -NH₂, -NHR, -NHR₂, -NHCOR, -I, -Br, -Cl, -F, -CN, -CO₂H, -CO₂R, -CHO, -COR, -CONH₂, -CONHR, -CONR₂, -COSH, -COSR, -NO₂, SO₃H, -SOR and -SO₂R; providing none of R₁, R₂, and R₃ is an acyl or thioacyl residue forming an amide with N¹;

Y is a linear, branched, or cyclic, saturated, or unsaturated alkyl chain containing one to ten carbons optionally substituted with one or more substituents selected from the group consisting of: epoxide -OH, -OR, =O, =S, =N-OH, -O₂CR, -SH, -SR, -I, -Br, -Cl, -F, -CN, -CO₂R, -CHO, -COR, -CONH₂, -CONHR, NRCOR, -CONR₂, NO₂, -SOR and -SO₂R; wherein one or more CH₂ groups if present in the alkyl chain, is optionally replaced by O or S; and,

R is a linear, branched, or cyclic one to ten carbon saturated, or unsaturated alkyl group optionally substituted with one or more substituents selected from the group consisting of: epoxide, -OH, -OR', =O, =S, =N-OH, -O₂CR', -SH, -SR', -SOCR', -OSO₃H, -NH₂, -NHR', -NHR'₂, -NR'₃⁺, -NHCOR', NR'₁COR', -I, -Br, -Cl, -F, -CN, -CO₂H, -CO₂R', -CHO, -COR', -CONH₂, -CONHR', -CONR'₂, -COSH, -COSR', -NO₂, -SO₃H, -SOR' and -SO₂R'; wherein R' is a linear, branched, or cyclic one to ten carbon, saturated, or unsaturated alkyl group optionally substituted with -NH₂.

Atty Dkt. No.: SMAR-020
USSN: 10/057,846

41. (Previously Presented): The method of claim 40, wherein

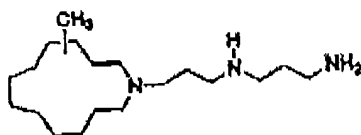
- (a) Y is $(CH_2)_n$ and n is 1, 2, or 3;
- (b) X is a saturated or unsaturated linear alkyl chain of 11-15 carbon atoms, optionally substituted with a C_1 - C_6 linear or branched alkyl group; or, a fully unsaturated linear alkyl chain of 11-16 carbon atoms;
- (c) one of R_1 and R_2 is selected from the group consisting of: H, methyl, and a linear or branched C_2 - C_6 alkyl group; and,
- (d) another of R_1 and R_2 is a linear or branched C_2 - C_6 alkyl group optionally substituted with a substituent selected from the group consisting of: NH_2 , $-NHR$, $-NR_3^+$, and $-NHCOR$, wherein R is a linear or branched C_1 - C_6 saturated or unsaturated alkyl group.

42. (Previously Presented): The method of claim 40, wherein the compound is of formula II in which:

- (a) Y is $(CH_2)_n$ and n is 1, 2, or 3;
- (b) X is a saturated or unsaturated linear alkyl chain of 11-15 carbon atoms, optionally substituted with R, with a C_1 - C_6 linear or branched alkyl group; or, a fully unsaturated linear alkyl chain of 11-16 carbon atoms;
- (c) one or two of R_1 , R, and R_3 is methyl, or a linear or branched C_2 - C_6 alkyl group; and,
- (d) another of R_1 , R, and R_3 is a linear or branched C_2 - C_6 alkyl group optionally substituted with a substituent selected from the group consisting of: NH_2 , $-NHR$, NR_3^+ and $-NHCOR$, wherein R is a linear or branched C_1 - C_6 saturated or unsaturated alkyl group.

43. (Original): The method of claim 40, wherein a compound in the composition has the structure:

Atty Dkt. No.: SMAR-020
USSN: 10/057,846



wherein the CH₃ group is joined at one of C12, C-13, C-14 and C-15.

44. (Previously Presented): The method of claim 40, wherein the compound is selected from the group consisting of: N-(3-azacyclotridec-1-ylpropyl)-1,3-propanediamine, N-(3-azacyclotetradec-1-ylpropyl)-1,3-propanediamine and N-[3-[(6Z)-azacyclopentadec-6-en-1-yl]propyl]-1,3-propanediamine.

45. (Canceled)

46. (Previously Presented): The method of claim 40, wherein the compound has the structure:



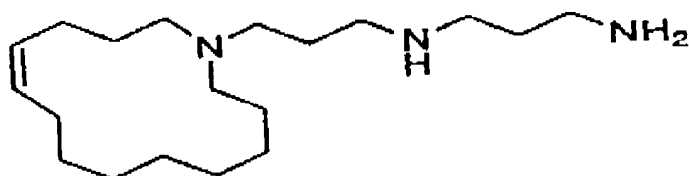
50. Claims 47 - 50. (Canceled)

51. (Previously Presented): The composition of claim 1, wherein X is a saturated or unsaturated linear alkyl chain of 12, 13 or 14 carbon atoms; Y is (CH₂)₂; one of R₁ and R₂ is -(CH₂)₃NH₂; and the other of R₁ and R₂ is H.

52. (Previously Presented): The method of claim 40, wherein X is a saturated or unsaturated linear alkyl chain of 12, 13 or 14 carbon atoms; Y is (CH₂)₂; one of R₁ and R₂ is -(CH₂)₃NH₂; and the other of R₁ and R₂ is H.

Atty Dkt. No.: SMAR-020
USSN: 10/057,846

53. (Previously Presented) The composition of claim 1, wherein a compound in the composition has the structure:



54. (Previously Presented) The method of claim 40, wherein a compound has the structure:

